In the claims:

1-27. (Canceled)

28. **(Amended)** A method for enhancing ~~the~~ formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen ~~selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has~~ comprising a conserved C-terminal seven-cysteine skeleton at least about 60% identical to residues 330-431 of human OP-1 (SEQ ID NO: 2), ~~and~~ wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.

29. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.

30. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.

31. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.

32. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.

33. **(Previously Presented)** The method of claim 28, wherein said morphogen is a BMP-2 polypeptide.

34. **(Previously Presented)** The method of claim 28, wherein said morphogen is a BMP-5 polypeptide.

35. **(Previously Presented)** The method of claim 28, wherein said morphogen is a BMP-6 polypeptide.

36. **(Previously Presented)** The method of claim 28, wherein said morphogen is a 60A polypeptide.

37-45. (Canceled)

46. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.

47. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.

48. **(Previously Presented)** The method of claim 28, wherein said morphogen comprises

residues 30-431 of SEQ ID NO: 2.

49-51. (Canceled)

52. (**Amended**) A method for enhancing ~~the~~ formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen ~~selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has~~ comprising a conserved C-terminal seven-cysteine skeleton at least about 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO: 2), ~~and~~ wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.

53. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.

54. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.

55. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.

56. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.

57. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.

58. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.

59. (**Previously Presented**) The method of claim 52, wherein said morphogen comprises residues 30-431 of SEQ ID NO: 2.

60. (**New**) The method of claim 52, wherein said morphogen is a BMP-2 polypeptide.

61. (**New**) The method of claim 52, wherein said morphogen is a BMP-5 polypeptide.

62. (**New**) The method of claim 52, wherein said morphogen is a BMP-6 polypeptide.

63. (**New**) The method of claim 52, wherein said morphogen is a 60A polypeptide.